ABSTRACT OF THE DISCLOSURE

A data encoding scheme maps a set of data to a number of spectral components, each component having an amplitude, a phase and a unique frequency. From these mapped tones, an analog baseband signal can be formed, which, when implemented in a data transmission scheme, can realize much higher throughput per available bandwidth than conventional techniques such as those employing binary baseband signals. The encoding scheme can also be implemented in data compression schemes and can realize lossless compression ratios exponentially superior to conventional compression schemes.